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QUARTERLY NARRATIVE REPORT
FOR
EASEMENT REFUGES DISTRICT IV

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Lake Ilo and Easement Refuges

Lake Ilo

I. General.

A. Weather Conditions: Data is not available but in general in comparison with Kenmare, Lake Ilo received more fall rain, less snow, and has been slightly warmer.

B. Water Conditions: The lake dropped less than three feet below spillway during the year and is thus in good shape. The ice is 23" thick.

C. Fires: None.

II. Wildlife.

A. Waterfowl: Mr. Dinkins reports as follows: Nov. 4, 2 Pelicans, 9 Canada Geese and 20,000 ducks consisting of 2,500 Baldpate, 500 Green-winged Teal, 60 Redheads, 75 Canvas-back, 1,500 Pintails, and the rest Mallards. On Nov. 7 the population was estimated by Mr. Dinkins at 20,000 ducks and 74 Canada Geese. On Nov. 8, 25,000 ducks and 74 Canada Geese and the next day upwards of 30,000 ducks and the same flock of geese. It snowed most of that day and the following day, Nov. 10 only 7,000 ducks remained. By Nov. 12 the number was down to just over 300 Mallards which have remained all winter. All are in good condition and are mostly males. Mr. Dinkins has trapped and banded 20 of them so far and taken 2 returns from those which wintered there a year ago.

B. Upland Game: The only upland game on the refuge since the hailstorm is about 20 to 30 Pheasants.

C. Other Species: Mr. Dinkins reports 2 Golden Eagles on Nov. 8.

D. Fur-bearers, Predators, and Rodents: A few Muskrat, and Mink are reported by Mr. Dinkins. Predators are not numerous.

E. Fish: Seem to be surviving satisfactorily.

III. Refuge Development and Maintenance.

A. Physical Development:

1. WPA: In November the crew hauled and spread 220 cubic yards of scoria on the roads. They also dug, poured concrete floor and walls and completed a 16' x 22 basement for addition to the cabin. Work on the cabin addition was suspended for awhile pending further authorization. In the interim, the WPA dug a cesspool about 56 feet to the southwest of the cabin. This is much further away from the well than the present outhouse. A pipe line was also laid from the well into the new basement. On the spillway the installation of the clay core was completed. About 144 cubic yards of clay and 4 cubic yards of bentonite were used. They also cleaned about 40 cubic yards of dirt out of the spillway bowl.

In December part of the crew continued working on the roads and spread 170 cubic yards of scoria. The main crew worked on the new addition to the cabin.

In January the addition was just about finished. The roof was on and shingled and the new siding on. The rooms finished with insulation board and the door and window casings put on. In the basement, a doorway was cut through the wall between the old and new basements. A hot air pipe furnace, received from Fort Peck, was installed. It is estimated that the addition is better than seventy-five percent finished. Other work consisted of putting siding, which was salvaged off the south side of the cabin where the addition connects, on the front of the icehouse. A road to the icehouse was also completed.

Another 55 cubic yards of scoria were spread on the roads.

2. Personnel: Patrolman Dinkins has, of course, spent most of his time at Lake Ilo supervising the WPA with excellent results.

Improvements have consisted of cleaning up the grounds and buildings, installation of shelves in the garage and one of the sheds, and a more orderly arrangement of supplies and equipment.

The servicing of the trucks and light plant have been regular weekly jobs. One of the trucks used by the WPA was overhauled.

The boats have been repainted, and a small shed moved to the headquarters for storing coal.

One trip was made to Fort Peck and one to Kenmare for the purpose of obtaining salvage materials.

One or two visits were made to most of the easements.

IV. Public Relations.

CAA student pilots from the Dickinson Normal College have been using the lake as a landing field for practicing emergency landings. This does not interfere in any way with the refuge.

Numerous local farmers have obtained their summer supply of ice from the lake.

V. Economic Use: None as land privately owned.

VI. Field Investigations.

A. Bird Banding: Twenty Mallards have been banded and 2 returns trapped.

Notes On Other Easements

Shell Lake: 11/3, 1200 ducks; 12/18, water level normal.

Legion Lake: 11/3, 1300 ducks; 12/18, ice level 1.2 feet below spillway.

Stewart Lake: 12/20, ice level 3.5 feet below spillway.

White Lake: 11/19, 200 ducks in a spring near refuge; reported to have departed later. 12/20, ice level 0.7 feet below spillway; no ducks present.

Lake Susie: 11/23, 3 muskrat houses dug out of lower side of dam and 3 muskrats killed. 12/18, ice level 2.3 feet below spillway.

Clearwater: 12/18, ice level 8 inches lower than last spring.

Hiddenwood: 12/18, Dinkins reports finding 5 large muskrat houses out in the bulrushes. The bulrushes had been cut down for a distance of 25 to 40 feet around each house. This is fine as there is too much dense bulrush and too little open water. This is the first evidence that there has been of muskrats being present.

aug-Oct '40

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Easement Refuges
District IV

LAKE ZAHL

Water Conditions: On September 1st the water levels were very low and the surface areas much reduced on the north side of the highway. There is little doubt but what the area dried almost completely during September.

Wildlife: On September 1st the waterfowl population was much reduced and numbered less than 1,000.

Maintenance: Posting improved on August 27, 28.

CLEARWATER LAKE (Oct. 11)

Water Conditions: Slightly lower than in August.

Wildlife: 16 Mallards, 12 Pintails, and 4 Blue-winged Teal.

Maintenance: Posting improved August 20.

SHELL LAKE

Water Conditions: The lake seems to hold about the same the year around.

Wildlife: On October 11th Patrolman Dinkins observed about 700 ducks consisting of Mallard, Scaup, Blue and Green-winged Teal, and Gadwall. Also present were 4 Pelicans.

On October 28th about 3,500 ducks, mostly Mallards, were on the lake. At least 20 Bufflehead were present and as the writer was leaving 17 Geese, probably White-fronted, were seen flying towards the lake.

Maintenance: Patrolman Dinkins improved the posting on August 22 and September 20th.

LEGION LAKE

Water Conditions: 1.4 feet below the spillway crest.

Wildlife: On October 10th, Mr. Dinkins estimated 2,600 Mallards and 400 other ducks consisting of Pintails, Blue and Green-winged Teal, Scaup, Gadwall, and Redhead.

On October 28th the writer observed about 1,000 Mallards, 100 Pintails, 100 Green-winged Teal, 200 Gadwall, 15 Ruddy, 16 Bufflehead, 3 Hooded Mergansers, and 2 Avocets.

Maintenance: On October 10th, Mr. Dinkins inspected the dam and posting. Tar and hemp were placed in a small crack.

LAKE SUSIE

Water Conditions: On October 11th the level was about 2.1 ft. below spillway.

Wildlife: On October 11th Mr. Dinkins reports about 6,000 ducks mostly Mallards, with a few Pintail, Blue and Green-winged Teal, Gadwall, Redhead, and Scaup. That is some concentration for less than 40 acres of water.

On October 26th the writer observed 50 Mallards, 100 Gadwall, 10 Baldpate, 50 Pintail, 5 Green-winged Teal, 3 Lesser Scaup, 3 Ruddy, 1 Hooded Merganser, 3 Coot, 1 Ring-billed Gull.

Maintenance: The dam was patrolled for muskrats on October 11th.

HIDDENWOOD LAKE

Water Conditions: The springs hold this lake at about the same level the year around.

Wildlife: On October 11th Mr. Dinkins observed about 1900 Mallards and 100 other ducks consisting of Pintails, Green-winged Teal,

Gadwall, Scaup, and Redhead.

The writer on October 26th, found 2,000 Mallards, 25 Baldpate, 500 Pintail, 50 Green-winged Teal, 15 Hungarian Partridge, 1 Wilson's Snipe, and 15 Rusty Blackbirds on the refuge.

Maintenance: Posting was improved on 8/21 and 10/11/40.

WHITE LAKE

Water Conditions: Holding up in good shape; 1 ft. below spillway on 9/13.

Wildlife: On October 5th: 250 Mallards, 50 Pintails, 25 Blue and Green-winged Teal (CMD). October 27th: 15 Canada Geese, 2 White-fronted Geese (one a cripple), 2,000 ducks consisting of Mallards, Gadwall, Baldpate, Pintail, Green-winged Teal, Shoveller, Ruddy; White Pelican-1; Ring-billed Gull-1, (SHL) & (CMD).

Maintenance: Posting improved.

STEWART LAKE

Water Conditions: Has dropped very little since July. Was 3.5 ft. below spillway on 9/13/40.

Wildlife: October 5th: Mallard 400, Gadwall 12, Pintail 50, Blue-winged Teal 20, Green-winged Teal 16, Canvasback 5 (CMD); October 27th: Pied-billed Grebe 1, Great Blue Heron 1, White-fronted Goose 1, Mallard 2,000; Ducks 500 (Gadwall, Baldpate, Pintail, Green-winged Teal, and Shoveller), Redhead 10, Canvasback 25, Lesser Scaup 25, Bufflehead 8, Ruddy 15, Hooded Merganser 2, Greater Yellowlegs 1, Long-billed Dowitcher 2, Franklin's Gull 15 (CMD & SHL).

CHARLES LAKE

Water Conditions: 2 ft. below spillway on October 13th.

Wildlife: October 13th: Mallards 8, Pintail 13, and Blue-

winged Teal 8 (CMD).

PRETTY ROCK

Water Conditions: 2.7 ft. below spillway on October 13th.

Wildlife: October 13th: Mallards 1200, Pintail 600, Blue-winged Teal 600, Baldpate 47, Green-winged Teal 150, Gadwall 25, Redhead 40 (CMD).

Maintenance: Fence around dam repaired.

LAKE PATRICIA

Water Conditions: 9/10 about 5.5 ft. below spillway; practically dry.

Wildlife: 9/10 about 150 ducks (CMD).

Maintenance: Posting improved and weeds cleaned out of diversion ditch.

LAKE OLIVER

Water Conditions: 10/20 about 2.1 ft. below spillway.

Wildlife: 10/20 - 1200 ducks (CMD).

Maintenance: Improved posting.

LAKE ILC

Water Conditions: 9/7 - 2.6 ft. below spillway; 9/13 - 2.7 ft. below spillway; 9/21 - 2.8 ft. below spillway; 9/30 - 2.6 ft. below spillway following 1.72 rain on 9/22; 10/18 - 2.7 ft. below spillway; 10/31 - 2.8 ft. below spillway.

Wildlife: Reports on the wildlife have been meagre, especially for August and September and rather general. Mr. Dinkins estimates his

40
1200
600
600
47
150
25
40

duck and goose populations as follows:

10/8/40	22 geese	9,000 ducks
10/12/40	142 " ✓	12,000 " ✓
10/19/40	93 "	9,000 "
10/26/40	75 "	9,000 "

Lacking more specific information, it is assumed that the geese were mostly White-fronted with a few Canadian Honkers.

On October 27 and 26th the writer observed: Horned Grebe 2; Pied-billed Grebe 1; White Pelican 50; Canada Geese 29; White-fronted Geese 75; Mallards 7,000; Ducks 2,000 consisting of Pintail, Baldpate, Gadwall, Green-winged Teal, and Canvasback; Bufflehead 8; Hooded Merganser 1 male.

Development by WPA: During August an average of about 12 men worked on the project. Their main job consisted of excavating a ditch 2 ft. wide, 25 ft. deep and 50 ft. long along the south side of the south wing wall of the spillway. Clay and coal were removed, and the ditch refilled with clay and bentonite mixed. This was carefully tramped and puddled in. The purpose of the core was to keep water from standing up against the concrete of the structure and to cut the seepage through the coal veins.

The men also hauled and spread 45 yards of scoria on the roads.

In September the crew averaged 10 men and worked on miscellaneous jobs. They dug, hauled, and spread 75 yards of clay mixed with scoria on the trails; did some back-sloping on the spillway; cultivated trees at the headquarters; painted the buildings; dug 150 holes for tree plantings in the Recreational Area and built 3 additional fireplaces.

^{over} The main job in October consisted of transplanting 1200 Cottonwoods and 600 Willow seedlings from an island in the lake to the Recreational Area; hauling and spreading 60 yards of scoria; building

a road to the ice house; excavating 16x22 basement for addition to cabin; placing forms and pouring concrete walls. Also a trench 2 ft. wide, 18 ft. deep, and 65 ft. long was excavated along the face of the spillway and carefully backfilled with clay and bentonite.

Personnel: Patrolman Chesley Dinkins has spent most of his time supervising the WPA work on Lake Ilo. The nature of the repair work on the spillway demanded and received very close attention. Numerous trips were also made to the easements and considerable time was spent in relocating and improving the posting.



road to the ice house; excavating 100000 basement for addition to
cabin; placing forms and pouring concrete walls. Also a trench 2 ft.
wide, 18 ft. deep, and 33 ft. long was excavated along the face of the
spillway and carefully backfilled with clay and bentonite.
Personnel: Foreman Chesley Binkins has spent most of his
time supervising the WPA work on Lake Ite. The nature of the repair
work on the spillway demanded and received very close attention.
Intensive trips were also made to the reservoir and considerable time
was spent in relocating and improving the position.



May-July 40

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Easement Refuges
District IV

Lake Zahl: August 1, 1940.

Water Conditions: North of the highway water although low is sufficient to carry a large number of birds through the summer; south of the highway it has virtually dried up, there being just a few shallow pools which will certainly disappear soon.

Vegetation: North unit is fine with the areas full of pondweeds and bordered by broad high stands of bulrush; south unit is mostly white-top grass and some patches of bulrush. The trees planted near the spillway are stunted but 85% alive.

Wildlife: Waterfowl estimated at about 3,500 ducks of about which at least 1,500 were this season's crop. The ducks included all the regular puddlers with Pintail predominating and a fair number of the divers - Canvasback, Redhead, Scaup, and Ruddy. At least 15 broods of Ruddies were seen. One Black Duck was also observed. Coots, Eared Grebe, and some Pied-billed Grebes together including young and old numbered over 1,500. Sora Rail, judging by the calls were quite abundant. Shorebirds were fairly common and included both Dowitchers and both Yellowlegs. Several young Avocets, Willets, and Killdeer were present. A small number of Black Terns, Franklin Gulls, and Ring-billed Gulls were present.

Maintenance: Dam, spillway, and posting were inspected. Later requires considerable attention.

Clearwater Lake: August 3.

In the Annual Report this pretty little lake was unjustly dismissed with one sentence.

Water: It is probably ten or more feet lower than it used to be several years ago but nevertheless is still in very fair condition. Mr. Dinkins considered it to be as high as in May. A little trickle of water was coming in at the northwest corner. The water is quite clear despite a muddy bottom.

Vegetation: Although the shores are gravelly and rocky there is a fine border of prairie bulrush with some hardstem bulrush. Aquatics appeared to be absent.

Waterfowl: About 90 adult and 150 young ducks were present, mostly Pintail and Shovellers but including about 6 females and 50 young Redhead. Two adult Scaup and 6 Ruddy Ducks were present. About 50 young and old Eared Grebe were present. Shorebirds included over 50 Avocets, 20 Killdeer, and at least 9 Belted *Piping* Plover, the latter probably constituting two families.

Shell Lake: August 3.

Water: Higher than last fall; very little beach exposed. Water milky but possibly due to recent rains.

Vegetation: Shores are gravelly and lack vegetation. A very fair marsh at north end and would be another at south end were it not for overgrazing. No evidence of aquatics.

Wildlife: Estimated 300 adult ducks and 200 young and 100 adult and young Coots and Eared Grebes. Six adult Western Grebe also present. Ducks were all puddlers with a predominance of Pintails and Mallards except for 6 Ruddies and a Canvasback hen with 2 young.

Maintenance: No structure under the control of the Service. Mr. Dinkins is planning to put in a day improving the posting.

Legion Lake: August 3.

Water: About 6 inches below the spillway crest. Is said to have flowed over about a month ago.

Vegetation: The cottonwoods planted along the southwest shore are doing quite well despite the presence of horses. Were it not for grazing there would be some very good marsh areas. At present this refuge is good only as a migration resting place and is of negligible value for nesting. However, it could be developed into a very fair nesting refuge if grazing was eliminated by purchasing a small portion of the present easement and fencing it. The total area would be less than 200 acres and would include the E $\frac{1}{2}$ NE $\frac{1}{4}$ Sec. 30 except for a ten acre strip of agricultural land along the east side; and the SE $\frac{1}{4}$ Sec. 19 except the agricultural strip of about 15 acres. This would give the Service the site of the dam, the cabin, and a mile of the best shoreline.

Wildlife: As indicated above, it is not much of a nesting area, 350 adults and 150 young ducks being observed. These are mostly in the creek in the NE $\frac{1}{4}$ Sec. 19. The creek is choked with pondweed and bordered by dense high stands of hardstem bulrush and cattails. The ducks included a few Canvasbacks and Redheads; Pied-billed Grebes were also in the creek.

We didn't get out onto the islands, but a few Common Terns appeared to be nesting on the westernmost island. Young Willets and Avocets were noted. Three Long-billed Curlew were on the flats with a small group of Marbled Godwits. Incidentally, they were the first Curlew the writer has seen in North Dakota.

Maintenance: Mr. Dinkins made considerable repairs on the spillway

This spring. Another crack has appeared and will be taken care of shortly. The grazing of horses on the dam is not helping any.

Lake Susie: August 3.

Water: Is down about one foot below spillway but still in good shape.

Vegetation: The shorelines all the way around are grazed and trampled bare; clipped shoots of bulrush, wild millet, spike weed were endeavoring to grow. Approximately the east third of the SW $\frac{1}{4}$ Sec. 16 is fenced off and the trees which were planted there have grown considerably this spring. The only cover is in this enclosure. Between it and the water everything is grazed bare. Inasmuch as the other three quarters of Section 16 (a school section) form one big pasture and the stock can obtain water at the north end of the lake, it seems that by some means it would be highly desirable to gain control of the SW $\frac{1}{4}$ Sec. 16 so the east shore may be protected by a fence. This would not interfere with the grazing and would very much increase the wildlife value of the lake. The creek in the meadow a short distance below the dam is always full of water and would make a fine addition to the refuge.

Wildlife: About 230 ducks were present but few if any young.

However, there were several young Pied-billed and Eared Grebes. Two Hooded Mergansers were present. Avocets had apparently tried to nest and Willets had a little success.

Maintenance: Spillway and dam seemed to be in good shape; no muskrats were noted.

Hiddenwood: August 3.

Water: The level is very fair but could rise a foot, maybe a

foot and a half before flowing out the culvert. There are only three small areas of open water in the midst of a jungle of hardstem bulrush. The springs were not flowing very fast but seem to maintain the water level.

Vegetation: The lake is almost a solid mat of dense, tall, hardstem bulrush. The bulrush is tending to close over the three small open areas of water. Steps should be taken to stop this by introducing muskrats or blasting new open holes, or raising the water level.

Wildlife: The lack of open water and the tall bulrushes made it hard to detect the presence of birds. It is doubtful, however, if there were more than 200 old and young ducks, Coots, and Grebes. All the ducks were puddlers. Night Herons were in the trees, some Pheasants in the brush, Long-billed Marsh Wrens in the rushes, and a Solitary Sandpiper at the spring.

Maintenance: No structures; Mr. Dinkins was instructed to improve the posting.

White Lake: August 3.

Water: Less than 6" below the spillway. Water very milky.

Vegetation: Very sparse, a few patches of bulrush.

Wildlife: About 250 ducks of which very few were young. No diving ducks nor Grebes present.

Maintenance: Damaged posters along highway were replaced. Mr. Dinkins was instructed to improve rest of posting and take care of two small spots of wave erosion in the dam next week.

Stewart Lake: August 3.

Water: Level seemed higher than last fall but was at least $2\frac{1}{2}$ feet below spillway.

Vegetation: Is mostly lacking on the margins but considerable pondweed in the lake.

Waterfowl: A brief survey revealed only about 500 ducks, a few Coots, and Grebes. Only about 150 of the ducks were young ones. Muskrats apparently froze out last winter as none were observed.

Maintenance: The cattle guard entrances at each end of the road leading to the Recreational Area have been closed by the owner as his horses were jumping over them. The Recreational Area requires considerable attention, and Mr. Dinkins was directed to take care of the details next week.

Charles Lake: August 4.

Water: About 9" below spillway; some seepage in the east spillway.

Vegetation: Several dark patches of pondweed were visible in the water. Marsh is lacking chiefly due to over grazing. A little hardstem bulrush is growing at the north end.

Wildlife: A liberal estimate of the duck population would be 10. One Mallard acted as though she had a nest. Lack of waterfowl due to a) lack of cover due to uncontrolled grazing and b) frequent public usage of area. Nesting value could be increased by cutting some of the loops in the creek in the NW $\frac{1}{4}$ Sec. 29 to create islands and by fencing. A four-foot Bullsna~~k~~e was killed just outside the refuge.

Maintenance: Checked entire boundary and replaced posters as needed.

Pretty Rock: August 4.

Water: Probably the highest it has ever been making a fine area but still 2.5 ft. below spillway.

Vegetation: Very little of value; closely grazed grass extended

to the water's edge around most of the shoreline. Very little point in planting unless areas can be fenced out.

Wildlife: About 100 would cover the combined numbers of ducks, Coots, and Pied-billed Grebes. About 50 Black Terns also present. A poor showing for the size of the water area.

Maintenance: Structure in good shape but posting to be improved.

Lake Patricia: August 4.

Water: At least 4 ft. below spillway level. Fills up and overflows the spillway each spring but rapidly seeps away in the quicksand which is said to underly the structure.

Vegetation: Mostly grasses with some bulrush and some pondweed.

Most of the area and shoreline subject to heavy grazing.

Wildlife: About 200 adult ducks and 300 young were estimated.

Also at least 10 adult and 30 young Pied-billed Grebes were observed. No diving ducks were noted. About 500 shorebirds were on the exposed flats. The birds were mostly in the west creek.

Maintenance: Structures appeared to be in satisfactory shape.

Posting was improved.

Lake Ilo: August 3 and 5th.

Weather: Weather data is not available for this refuge but on the whole it has been about the same as at Kenmare with a fair amount of rain.

However, a very severe hailstorm with hailstones as big as hens eggs swept across the refuge from the Killdeer Mountains on July 24th. The hail did extensive damage to the vegetation, wildlife, and the buildings.

At the headquarters all windows and screens on the north and west sides were broken. The white drop-siding was pitted,

and cracked and over half the paint removed (see photographs). The tar paper roofs of the WPA buildings were riddled and ruined.

Crops were a total loss; even weed fields and the roadside ditches looked as though they had been closely mowed, then heavily grazed by sheep, followed by a swarm of grasshoppers. Although the trees did not lose all their foliage, so much bark was knocked off many of them that ^{it} is questionable whether some will live.

Following the storm Mr. Dinkins assisted by a WPA crew picked up 1635 dead ducks and 181 dead shorebirds around the shore. Many were actually still alive when picked up but were so badly injured that they were killed. Many cripples are still swimming around and successfully eluding capture. Upland game and songbirds also suffered heavily.

Water Conditions: The lake is only two feet below spillway level and is in very good condition. The sloughs to the southeast, however, are dry.

Wildlife (Waterfowl): Prior to the hailstorm Mr. Dinkins estimated about 3,000 adults and about 3,600 young ducks. The hail loss allowing for cripples which will die later is about 1,800 so that there is still a profit of 1,800 young ducks raised. A recent survey showed that there were easily 4,500 to 5,000 ducks on the lake.

Had the shores been bordered mostly by dense tall stands of bulrush rather than being mostly grazed off, the losses would probably have been considerably less.

Upland Game and Other Birds: All were virtually wiped out on and

near the refuge by the hail.
(letter 2-14-41)
UW.

Development Work: Has been carried on under Patrolman Dinkins'

supervision with a WPA crew as follows:

Recreational Area: Built and completed an extraordinarily fine, rubble-masonry, public bathhouse 47 ft. x 14 ft. (see photograph). A job Mr. Dinkins may justly be proud of. A beach has also been constructed in front of the bathhouse with 550 yards of sand. The WPA also erected ^{a flagpole} and watered and cultivated trees in the picnic area.

Roads: About 1537 yards of scoria were dug, hauled, and spread on the roads for surfacing.

Headquarters: Completed ice house and rip-rapped banks at each side of the entrance.

Diversion Ditch: About 800 yards were excavated in deepening the ditch which leads from the lake to the slough.

Spillway: A great deal of time and attention have been given to the dam and spillway in attempts to stop the flow of water passing under the dam in coal veins and to keep the water away from the concrete which is being eaten away by acids in the water. The bowl of the spillway and the creek channel were cleaned out so as to drain water away from the apron. The rubble masonry wall was repaired. About 70 feet of clay core was installed to keep the water back from the structure. The WPA also took up and replaced at a lower level 50 ft. of drainage tile and laid 18 more feet.

Maintenance: In addition to supervising the WPA, Patrolman Dinkins carried on numerous routine jobs, made and anchored out buoys

to mark off the boating area, installed signs at the Park, placed buoys connected by ropes to show depth at the swimming beach. Also he repaired hail damage to the buildings. In May as indicated in the Annual Report, trips were made to the easements to plant aquatic seeds.

Feb-Apr 1940

LAKE ILO AND EASEMENT
REFUGES IN DISTRICT IV

Mr. Chesley M. Dinkins, the Patrolman stationed at Lake Ilo, has been busy as usual.

At Lake Ilo during the past three months Mr. Dinkins built an ice house in the hillside on the shore near the boathouse. The garage was improved by the addition of an outside coal bin at the rear and a small door was placed in the side of the garage. Formerly one could enter the garage only by opening the large car doors. For his office Mr. Dinkins made a file box and for his pick-up a combination seat and tool box. A winter cab for the pick-up box was also built. From salvage materials a duck trap was constructed and used to trap 224 ducks which were banded. Some 600 ducks were fed all winter at the springs below the dam.

Using logs and wood and a lathe Mr. Dinkins has nearly completed a very ingenious boat track for sliding boats in and out of the boathouse and the water.

Twenty gopher poisoning trays were made of salvage lumber and have been set out.

A gasoline storage tank and pump were received and were installed between the entrance gate and the garage.

Mr. Dinkins made two trips to the Des Lacs Refuge. On March 8 he obtained grain for feeding the ducks. On April 15, Mr. Dinkins came after 330 lbs. of aquatic seeds, 150 lbs. of gopher bait, and a load of salvage lumber, all of which he took back in the Reo.

WATER AND WILDLIFE

Lake Ilo had risen from 1.8 ft. below spillway level to 1.25 ft. below spillway level on April 30th. It probably will not raise much higher. Mr. Dinkins reports the water is clear and fresh. Fish apparently wintered well. A nine inch Crappie was found recently. The fish were planted two years ago.

Waterfowl have used the area extensively. Some 600-800 ducks wintered and fair flights were noted this spring. Numbers of geese, diving ducks, and crane stopped at the refuge. The upland game on the refuge consists of about 75 Pheasants, 32 Hungarian Partridge, and 11 Prairie Chicken.

700 - 49-40
Dinkins
WPA WORK

Under Mr. Dinkins supervision the WPA placed 60 yards of coarse scoria on the Lake Ilo spillway to stop erosion. On 1-3/4 miles of road 2290 yards of scoria has been placed and mixed with clay as a binder.

In the Recreational Area the trees were cultivated and a 1/2 acre of sod transplanted. The parking area was improved by leveling and sloping road banks which consisted of moving about 700 yards of dirt.

NOTES ON OTHER EASEMENT AREAS

Lake Oliver:

Cracks in spillway were repaired with tar and hemp.

Lake Susie:

Rocks were placed to stop erosion on the dam.

Pretty Rock Lake:

Cracks in spillway were filled with tar and hemp. An old WPA shack was razed.

Charles Lake:

Tar and hemp was poured into the cracks in the spillway. This area is full, water having passed over the spillway.

White Lake:

About 350 ducks wintered here. Mr. Dinkins twice took down grain and turned it over to a local person to feed to the birds.

On March 26 the water was still 1.2 ft. below spillway level but it probably is full now.

Stewart Lake:

On March 26th the lake was 3.5 feet below spillway level. It has probably raised some and may be full now.

Other Areas:

Due to the late spring, Mr. Dinkins has not as yet visited the other easement refuges so it is not possible to report on their conditions at this time.

This report compiled and respectfully submitted by

Seth H. Low

Seth H. Low
Junior Refuge Manager



This report compiled and respectfully submitted by

W. H. Low

W. H. Low
Junior Wildlife Manager



nov.-Jan. 1940

Lake Ilo and Easement Refuges

Mr. Chesley M. Dinkins, Patrolman-Laborer, stationed at the Lake Ilo Refuge has taken right ahoid of things and has accomplished much, both on Lake Ilo and the easement refuges.

The first two weeks of November were spent mostly at Lake Ilo keeping an eye on the 6,000 ducks and some 30 geese which were staying on the lake. Posting was improved and some of the signs changed. A WPA road job involving the placing of 500 yards of dirt and 10 yards of rip-rap was supervised. Also the WPA was supervised in placing rip-rap on both wings of the spillway. Thistles were removed from the fences and ditches and burned. The dam was patrolled for muskrats. Two NYA boys assisted in planting a bushel of wild rice in the lake.

From the 24th to the 26th, Mr. Dinkins made an inspection trip of 507 miles to Stewart Lake, White Lake, Charles Lake, Pretty Rock, Lake Patricia, and Lake Oliver. Particular attention was given to muskrats.

On the 28th a trip was made to Lake Susie and Legion Lake. At Legion, a depression in front of the spillway was filled with $3\frac{1}{2}$ yards of dirt and the cabin has been cleaned out. At Susie work was begun on digging muskrats out of the back toe of the dam.

A brief summary of the above inspection of each easement follows:

Stewart Lake: (Nov. 24) No muskrat damage but plenty of "rats" present in lake. 2,000 ducks present. Recreational buildings cleaned and closed for winter.

White Lake: (Nov. 24) 1,500 ducks; no muskrat damage and but few "rats" present. Water about 2 feet down on spillway level.

Charles Lake: (Nov. 25) 1,000 ducks; repaired dam fence; no muskrat damage but some "rats" nearby; water $2\frac{1}{2}$ feet below spillway.

Pretty Rock: (Nov. 25) 1,500 ducks; water $2\frac{1}{2}$ feet down; no muskrat damage; cleaned spillway of thistles; filled holes on up side of spillway.

Lake Patricia: (Nov. 25) Lake down about 6 feet.

Lake Oliver: (Nov. 26) Repaired signs and fence. Water down about 3 feet.

During December Mr. Dinkins made a few trips to Lake Susie to dig muskrats out of the downstream toe of the dam. WPA was supervised in rip-rapping and in laying 130 feet of drainage tile along the south wing-wall of the dam. Two NYA boys helped transplant two loads of buffalo grass to the headquarters yard. Three upland game shelters were built.

A trip was made to Des Lacs after Christmas for a conference with Low and to receive a stove, some salvage wire, and wood posts. The wire was subsequently transported to White Lake for fencing the dam.

In January Mr. Dinkins worked mostly at Lake Ilo. At the headquarters he made repairs on the light plant and started building a boat track.

In the field a crew of 16 WPA men were supervised in placing 50 yards of rip-rap and 5 yards of gravel on the wing-walls of the spillway; in spreading scoria over 3/4 miles of road, and in hauling materials to the Park for the bathhouse.

Two NYA boys put in their time assisting on the above mentioned jobs.

On the 22nd Mr. Dinkins made a trip to Long Lake in the Reo, loaded on an assortment of pipe, and hauled the pipe to Des Lacs. After a day and a half conference he returned to Lake Ilo with his new pick-up.

He took back 20 bushels of grain for winter feeding of upland game and possible feeding of the 600 ducks which are still lingering in the spring holes below the dam.

This report compiled and respectfully submitted by

Seth H. Low

Seth H. Low
Junior Refuge Manager

2/5/40





5/2/40

Director, Biological Survey
J. H. Brown

J. H. Brown

This report compiled and respectfully submitted by

Aug-Oct. 1939.

EASEMENT REFUGES
DISTRICT 4

Starting with a Regional Office Memorandum dated September 26th and a meeting held at the Bismarck Office on October 5th, the administration, maintenance, and patrol of the easement refuges was turned over to the managers of some of the large primary refuges.

The state has been divided into five districts. The Des Lacs Refuge has been designated as the Headquarters and Lake Ilo as the Sub-Headquarters of district 4. At present district 4 includes all of the western third of the state and includes the following areas:

Lake Zahl	Clearwater Lake
Shell Lake	Lake Susie
Legion Lake	Charles Lake
Hiddenwood Lake	Lake Oliver
Lake Ilo	Pretty Rock Lake
Stewart Lake	Lake Patricia
White Lake	

Mr. Chesley M. Dinkins of Dunn Center has been appointed as a Laborer-Patrolman and stationed at the Lake Ilo Refuge. He has been assigned to patrol and maintain the easement refuges in district 4.

Mr. Dinkins reported to the Des Lacs office on October 2 for a brief training period. The Refuge Manager and Patrolman Dinkins attended the Bismarck meeting on Thursday, October 5th and then spent Friday, Saturday, and Sunday touring and inspecting the easement refuges in district 4. All but Lake Patricia and Clearwater Lake were visited. Lake Zahl had been examined previously.

Water conditions were found to be very good on all the areas except Clearwater which was not visited but which is said to be dry. Dams and fences were found to be generally in good condition but the posting was poor and inadequate. Waterfowl in varying numbers were found on all the areas. The list of easement refuges above is in two columns. The best water conditions and largest concentrations of ducks and geese were found on those listed in the left column. Those in the right column were not so well patronized. The exact status of Clearwater and Lake Patricia, however, is not definitely known to the writer.

A few figures will illustrate how well the easement areas are being used.

<u>Easement</u>	<u>Date</u>	<u>Ducks</u>	<u>Geese</u>
Shell Lake	10/1	3,000 ✓	-----
Lake Zahl	10/4	2,000 ✓	59 ✓
Lake Oliver	10/6	300 ✓	-----
Lake Ilo ✓	10/6	12,000	300 ✓
Stewart Lake	10/7	3,000 ✓	58 ✓
White Lake	10/7	800 ✓	125 ✓
Pretty Rock	10/7	1,200 ✓	-----
Charles Lake	10/7	500 ✓	-----
Lake Susie	10/8	300 ✓	-----
Hiddenwood Lake	10/8	7,000 ✓	-----
Legion Lake	10/8	7,000 ✓	24 ✓
		<u>37,100</u>	<u>566</u>

In just one week the writer saw and conservatively estimated 37,100 ducks, mostly Mallards, and 566 Geese, mostly White-fronts, on eleven easement refuges. Since then much larger concentrations have been reported from both Lake Zahl and Lake Ilo.

Patrolman Dinkins returned to Kenmare for further training. However, it was deemed advisable to cut the training short and send Mr. Dinkins back to Lake Ilo to guard the concentration of ducks and geese. In addition to patrolling the refuge, Mr. Dinkins has been fixing up the buildings so that he may move his family in for the winter. The area has been reposted and various improvements made. For transportation Mr. Dinkins has had only the Des Lacs Reo stake truck.

As soon as the waterfowl have left Lake Ilo and Mr. Dinkins has everything in shape for the winter and his family moved in, it is planned to bring Mr. Dinkins up to Des Lacs for further training and to assist in the predator control program.

LAKE ILO PATROL CABIN



Back side showing cabin and one stall garage.



Front side which looks out over dam and lake.